## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property **Organization**

International Bureau



## 

(43) International Publication Date 19 August 2004 (19.08.2004)

PCT

(10) International Publication Number WO 2004/069221 A1

(51) International Patent Classification7:

A61K 7/48

(21) International Application Number:

PCT/IB2004/000240

(22) International Filing Date: 22 January 2004 (22.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/444,496

3 February 2003 (03.02.2003)

(71) Applicant (for all designated States except US): WARNER-LAMBERT COMPANY LLC [US/US]; 201 Tabor Road, Morris Plains, NJ 07950 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): NAIR, Xina [US/US]; 2 Farmers Lane, St. James, NY 11780 (US).

(74) Agents: LUMB, J., Trevor et al.; Pfizer Inc., 201 Tabor Road, Morris Plains, NJ 07950 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED FORMULATION FOR SKIN-LIGHTENING AGENTS

(57) Abstract: A new topical formulation for skin lightening agents, such as 4-cycloalkyl resorcinols, has been discovered. This new formulations enhances the efficacy of the skin-lightening agent. It allows the physician, or consumer, to utilize a lower dose of the skin-lightening agent (i.e. to utilize a lower concentration of the skin lightening agent). The formulation utilizes a carrier which contains a hydroxyl compound in admixture with a co-solvent.